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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,519	03/02/2004	Andrew E. Gruber	091154	2773

23696 7590 06/29/2009

QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER	
NGUYEN, VAN H	

ART UNIT	PAPER NUMBER
2194	

NOTIFICATION DATE	DELIVERY MODE
06/29/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary	Application No.	Applicant(s)	
	10/791,519	GRUBER ET AL.	
	Examiner	Art Unit	
	VAN H. NGUYEN	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,17-21 and 23-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15, 17-21, and 23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed 04/22/2009.

Claims 1-15, 17-21, and 23-27 are currently pending in this application. Claims 16 and 22 have been cancelled. Claims 26 and 27 have been added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15, 17-21, and 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by **Dye et al.** (US 6518965 B2).

As to claim 1:

Dye teaches a method for processing command information in a command processing system *(a video, 2D and 3D graphics controller... manipulating and rendering 3D graphics... executes the 3-D VDRL... stores the pixel data generated by execution of the*

3-D VDRL in a conventional frame buffer... render the pixel data on the screen... rendering engine for real time display after executing the 3-D VDRL... the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information...During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30], the method comprising:

detecting a real time event *(real time)* while monitoring a plurality of event signals *(signals)*, wherein the plurality of event signals are generated by a plurality of engines *(engines)* and one of the plurality engines is a 3D engine *(3D video graphics engine) [see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*; and

causing commands *(commands)* in a real time event command buffer *(buffer)* to be fetched *(fetched/fetching)* and consumed in response to the real time event *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 2:

Dye teaches providing an event selector signal to a comparator; providing the plurality of event signals to the comparator; and generating an event detection signal when an event

signal is equivalent to the event selector signal *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 3:

Dye teaches providing the commands in the real time event command buffer to be processed by a command processor *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 4:

Dye teaches the real time event includes a system command from a system command buffer processed by a command processor, the method further comprising: first consuming all of the commands within the event command buffer; and in response to processing all of the commands of the event command buffer, processing a next system command within the system command buffer *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 5:

Dye teaches detecting a second real time event; and causing commands in a second command buffer to be fetched and consumed in response to detecting the second real time event *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 6:

Dye teaches a method for processing command information *(a video, 2D and 3D graphics controller... manipulating and rendering 3D graphics... executes the 3-D VDRL... stores the pixel data generated by execution of the 3-D VDRL in a conventional frame buffer... render the pixel data on the screen... rendering engine for real time display after executing the 3-D VDRL... the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information...During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30]*, the method comprising:

providing system commands to a command processor from a system command buffer; detecting a real time event while monitoring a plurality of event signals, wherein the plurality of event signals are generated by a plurality of engines and one of the plurality of engines is a 3D engine; fetching commands in a real time event command buffer in response to the real time event; providing the commands in the real time event command buffer to the command processor; and consuming the real time event commands by the command processor *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 7:

Dye teaches providing an event selector signal to a comparator; providing the plurality of event signals to the comparator; and generating an event detection signal when at least one of the event signals is equivalent to the event selector signal *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 8:

Dye teaches fetching the system commands from the system command buffer; in response to detecting a real time event, pausing the fetching of the system commands; and upon the processing of all the real time event commands in the real time event command buffer, resuming the fetching of system commands from the system command buffer *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 9:

Dye teaches detecting a second real time event; fetch commands in a second real time event command buffer; providing the commands of the second real time event command buffer to the system processor; and consuming the second real time event commands by the system processor *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 10:

Dye teaches a method for processing command information *(a video, 2D and 3D graphics controller... manipulating and rendering 3D graphics... executes the 3-D VDRL... stores the pixel data generated by execution of the 3-D VDRL in a conventional frame buffer... render the pixel data on the screen... rendering engine for real time display after executing the 3-D VDRL... the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information...During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30]*, the method comprising:

loading real time event into a real time event detector; providing a system command from a system command buffer to a command processor; detecting a real time event while monitoring a plurality of event signals, wherein the plurality of event signals are generated by a plurality of engines and one of the, plurality of engines is a 3D engine; fetching commands in the real time event command buffer; providing the commands of real time event command buffer to the system processor; and consuming the real time event commands by system processor *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 11:

Dye teaches providing an event selector signal to a comparator; providing the plurality of event signals to the comparator; and generating an event detection signal when an event signal is equivalent to the event selector signal *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 12:

Dye teaches loading a second real time event into the real time event detector *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 13:

Dye teaches an apparatus for processing command information *(a video, 2D and 3D graphics controller… manipulating and rendering 3D graphics… executes the 3-D VDRL… stores the pixel data generated by execution of the 3-D VDRL in a conventional frame buffer… render the pixel data on the screen… rendering engine for real time display after executing the 3-D VDRL… the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information…During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30]*, the apparatus

comprising:

a command processor for processing system commands from a system command buffer; a real time event engine which monitors a plurality of event signals for a real time event; and a real time event command buffer, containing a plurality of real time event commands, operably coupled to the real time event engine; a plurality of engines providing the plurality of event signals, wherein one of the engines is a 3D engine; and wherein when the real time event occurs, the real time event commands are fetched and consumed by the command processor *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 14:

Dye teaches the first real time event engine comprises: a real time event detector comprising: an event table containing an event selector; a comparator operative to receive the event selector; and wherein the plurality of engines provide the plurality of event signals to the comparator; and wherein the comparator compares the plurality of event signals to the event selector and produces an event detection signal when at least one of the plurality of event signals matches the event selector *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 15:

Dye teaches the event table further contains a command buffer pointer and a length of command buffer field wherein the command buffer pointer points to a command buffer

and the length of command buffer field provides the number of commands within the command buffer *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 17:

Dye teaches the event table is stored in a local command processor memory *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 18:

Dye teaches a real time event controller which programs the real time event detector with the real time event selector for the detection of the real time event *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 19:

Dye teaches a second real time event engine which monitors the commands provided to the command processor for a second real time event; and a second real time event command buffer, containing a plurality of second real time event commands, operably coupled to the second real time event engine, wherein when the second real time event occurs, the second real time commands are fetched and consumed by the command processor *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 20:

Dye teaches an apparatus for processing command information *(a video, 2D and 3D graphics controller... manipulating and rendering 3D graphics... executes the 3-D VDRL... stores the pixel data generated by execution of the 3-D VDRL in a conventional frame buffer... render the pixel data on the screen... rendering engine for real time display after executing the 3-D VDRL... the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information...During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30]*, the apparatus comprising:

a command processor for processing system commands from a system command buffer; a first real time event engine which monitors a plurality of event signals for a first real time event; a plurality of engines providing the plurality of event signals, wherein one of the plurality of engines is a 3D engine; a first real time event command buffer, containing a plurality of first real time event commands, operably coupled to the first real time event engine, wherein when the first real time event occurs, the processing of the system commands is paused and the first real time event commands are fetched and consumed by the command processor; a second real time event engine which monitors the plurality of event signals for a second real time event; and a second real time event

command buffer, containing a plurality of second real time event commands, operably coupled to the second real time event engine, wherein when the second real time event occurs, the processing of commands by the command processor is paused and the second real time event commands are fetched and consumed by the command processor *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 21:

Dye teaches the first real time event engine comprises a first real time event detector having a first event selector and a first comparator which receives the first event selector; the second real time event engine comprises a second real time event detector having a second event selector and a second comparator which receives the second event selector; and a plurality of engines operably coupled to the first comparator and the second comparator, whereupon when one of the event signals matches the first event selector, a first event detection signal is produced by the first comparator and when one of the event signals matches the second event selector, a second event detection signal is produced by the second comparator *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 23:

Dye teaches a graphics controller *(a video, 2D and 3D graphics controller... manipulating and rendering 3D graphics... executes the 3-D VDRL... stores the pixel data generated by execution of the 3-D VDRL in a conventional frame buffer... render*

the pixel data on the screen... rendering engine for real time display after executing the 3-D VDRL... the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information...During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30] comprising:

a command processor for processing system commands from a system command buffer; a first real time event engine which monitors a plurality of event signals for a first real time event; a plurality of engines providing the plurality of event signals, wherein one of the plurality of engines is a 3D engine; and a first real time event command buffer, containing a plurality of first real time event commands, operably coupled to the first real time event engine, wherein when the first real time event occurs, the processing of the system commands is paused and the first real time event commands are fetched and consumed by the command processor *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 24:

Dye teaches a second real time event engine which monitors the plurality of event signals for a second real time event; a second event command buffer, containing a plurality of second real time event commands, operably coupled to the second real time event engine, wherein when the second real time event occurs, the processing of commands by the

command processor is paused and the second real time event commands are fetched and consumed by the command processor *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 25:

Dye teaches the second real time event of the second real time event engine is programmed by the first real time event engine *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 26:

Dye teaches an apparatus for processing command information *(a video, 2D and 3D graphics controller... manipulating and rendering 3D graphics... executes the 3-D VDRL... stores the pixel data generated by execution of the 3-D VDRL in a conventional frame buffer... render the pixel data on the screen... rendering engine for real time display after executing the 3-D VDRL... the 3-D VDRL is read and interpreted for triangle parameter data, texture address, attributes and other control information...During execution of the 3-D VDRL, the 3-D VDRL is fetched for instructions and pointers to control the rasterization of the output image by the 3D engine. Execution of the 3-D VDRL may cause rasterization of the output image to the memory on to the display device) [see Col. 3, line 29-Col.5, line 30]*, the apparatus comprising: means for processing system commands from a system command buffer; first means for monitoring a plurality of event signals for a first real time event;

a plurality of means for providing the plurality of event signals, wherein one of the plurality of means is a 3D engine; a first means for containing a plurality Of first real time event commands, operably coupled to the first means for monitoring; wherein when the first real time event occurs, the processing of the commands by the means for processing system commands is paused and the first real time event commands are fetched and consumed by the means for processing system commands; a second means for monitoring the plurality of event signals for a second real time event; and a second means for containing a plurality of second real time event commands, operably coupled to the second means for monitoring, wherein when the second real time event occurs, the processing of commands by the means for processing system commands is paused and the second real time event commands are fetched and consumed by the means for processing system commands *[see Col. 3, line 29-Col.5, line 30; see also, Figs. 4-6 and the discussion beginning at col.13, line 7]*.

As to claim 27:

Dye teaches the first monitoring means comprises a means having a first event selector and a first means for receiving the first event selector; the second monitoring means comprises a means having a second event selector and a second means for receiving the second event selector; and wherein the plurality means are operably coupled to the first means for receiving and the second means for receiving, whereupon when one of the event signals matches the first event selector, a first event detection signal is produced by the first means for receiving and when one of the event signals matches the second event

selector, a second event detection signal is produced by the second means for receiving *[see Figs. 4-6 and the discussion beginning at col.13, line 7]*.

Response to Arguments

3. Applicant's arguments with respect to claims 1-15, 17-21, and 23-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

5. Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM-6:00PM. The examiner can also be reached on alternative Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HYUNG S. SOUGH can be reached at (571) 272-6799.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194